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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/514,411	11/15/2004	Hiroshi Yamada	1806.1003	4369
21171	7590	05/19/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			JOHNSON, CONNIE P	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/514,411	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> Connie P. Johnson	<b>Art Unit</b> 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/09/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 4, 8 and 9-13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 4-12 of U.S. Patent No. 7,029,825. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions teach a photosensitive resin composition for forming a laser engravable printing element.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemiya et al., U.S. Patent No. 6,372,351 B1 in view of Kakishita et al., U.S. Patent No. 6,387,594 B1.

Takemiya teaches a resin composition comprising an epoxy resin, a non-conductive carbon and an inorganic filler (col. 2, lines 44-47). The epoxy resin, acrylic resins and fluorine resins meet the limitations of thermoplastic and solvent-soluble resins. Table 1, example 1 discloses the epoxy resins in an amount of 100 parts by weight and an arylakyl phenolic resin in an amount of 87 parts by weight in the composition. The molecular weights of the resins used are conventional and meet the limitations of instant claim 1. The composition further comprises a coupling agent (organic compound) such as vinyltriethoxysilane and meets the limitations of a polymerizable unsaturated group per molecule and molecular weight as in instant claim 1. The inorganic filler may comprise powders of fused silica, alumina and zirconia. The inorganic filler may also comprise a spherical particle shape (col. 9, lines 15-28). The composition may comprise a non-conductive carbon material (carbon black covered with an insulating, inorganic material such as silica) and having an average particle diameter of 0.3 to 5 $\mu$ m (col. 8, line 59), surface area of 130m<sup>2</sup>/g or smaller, and a DBP oil absorption of 120cm<sup>3</sup>/100g (120ml/100g) or less (col. 10, lines 34-40). Since the average particle diameter and surface area meet the limitations of the inorganic

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material, it would be expected that the average pore diameter and pore volume would be optimized. The epoxy composition may be molded, cured and exposed to laser marking in electronic devices (col. 10, lines 55-64). Takemiya does not teach the process of forming a relief printing element with the resin composition. However, Kakishita teaches a plate making film comprising a substrate, a hydrophilic, transparent film layer and a polymeric layer. The transparent film layer (elastomeric layer) comprises a photosensitive polyurethane resin. The polyurethane resin is in a liquid state at room temperature, subsequently becoming a plastic film after heating (col. 11, lines 45-60). The resin is coated onto a transparent plastic substrate, which is representative of a sheet composition. The resin is then irradiated to crosslink the polymeric compound in the resin, which is representative of photocuring as in instant claim 9 (col. 6, lines 17-22 and 61-65). Applicant is reminded that claim 9 is a product by process claim, refer to MPEP 2113, "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The resin composition was exposed, washed with water and exposed again. This process removes selected areas of the resin that are not used to form a letterpress. The composition has a Shore hardness of 60 degrees (col. 12, lines 25-45). The laser exposure is a form of heating and therefore meets the limitations of

instant claim 13. It would have been obvious to one of ordinary skill in the art to combine the product of Takemiya with the process of Kakishita because Kakishita teaches the plate making process comprising a photosensitive resin as conventional.

Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori, U.S. Patent No. 6,399,270 B1.

Mori teaches a printing plate comprising inorganic porous particles, a plastic resin (col. 11, lines 57-64) and an organic compound (col. 43, line 39). The inorganic porous particles may comprise an average particle size (diameter) of no more than 1 $\mu$ m, a pore volume of not less than 0.5ml/g (col. 3, lines 1-8). Since the inorganic particles meet the limitations of pore volume and particle size (diameter), it is expected that the average pore diameter would also meet the limitation of instant claim 1. The plastic resin may comprise thermally fusible materials, such as novolac and acryl resins that have a softening point of 50 to 200<sup>0</sup>C (col. 13, line 54 and col. 14, line 15). The molecular weights of the resins used are conventional and are present in an amount of 20 to 80% by weight of the photosensitive layer (col. 46, lines 37-38). The plastic resins in the printing plate may further comprise a solvent-soluble resin, such as a polyimide resin (col. 11, line 57). The organic compound has a molecular weight of 400 to 1,000 and is present in an amount of 5 to 70% of the photosensitive layer, therefore is present at least in an amount equivalent to 5 to 200 parts by weight of the resin (col.44, line 51-56). The organic compound also meets the limitations of instant claim 4. The printing plate is exposed to infrared laser and developed (col. 48, lines 23-36).

Claims 1, 2, 5, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemiya et al., U.S. Patent No. 6,372,351 B1 as applied to claim 1 above, in view of Watanabe et al., U.S. Patent Publication No. 2002/0045126 A1 and further in view of Mohr et al., U.S. Patent no. 5,851,649.

Takemiya teaches an epoxy resin composition comprising an epoxy resin, a non-conductive carbon and an inorganic filler (col. 2, lines 44-47). Takemiya does not teach the sphericity of the silica particles or polyhedral particles. However, Watanabe teaches a photocurable composition comprising spherical silica particles. The spherical silica particles have a sphericity of 0.95 or more (page 5, [0056]). Watanabe also teaches the spherical silica particles may also comprise an average particle diameter of 1-50 $\mu$ m. Therefore, it would have been obvious to one of ordinary skill in the art to use particles having a sphericity amount as claimed because Watanabe shows the sphericity amount as conventional in photosensitive resins. Watanabe does not teach polyhedral particles. However, Mohri teaches inorganic porous particles, such as polyhedral crystals with a pore size distribution of smallest (10%) to largest (90%) sphere in the polyhedral particle ( $D_{10}/D_{90}$ ) is no more than 3 (abstract). According to figure 3 in the Mohri reference, the pore volume distribution is at 100% when the pore diameter of the particle is approximately 5-10nm (0.005-0.010 $\mu$ m). Therefore, it would have been obvious to one of ordinary skill in the art that the polyhedral particles having a  $D_{10}/D_{90}$  ratio of 3 would be expected to have a  $D_3/D_4$  ratio of 1 to 3 because the values are based on pore volume distribution and diameter.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,410,123 B1 Ink Jet Recording Paper, U.S. Patent 6,569,816 B2 Composition Having Lubricity and Product Comprising the Composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Connie P. Johnson whose telephone number is 571-272-7758. The examiner can normally be reached on 7:30am-4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
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